United States Patent Office.

GEORGE WILKES, OF NEW YORK, N. Y.

Letters Patent No. 107,989, dated October 4, 1870.

IMPROVEMENT IN CORRUGATED METALLIC PAVEMENTS

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE WILKES, of the city, county, and State of New York, have invented a new and improved Corrugated Metallic Street-Pavement; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a plan or top view of my improved corrugated street-pavement.

Figure 2 is a vertical transverse section of the same.

Figure 3 is a detail plan view, on an enlarged scale, of a portion of the pavement.

Similar letters of reference indicate corresponding parts.

This invention has for its object the application of the railway principle to common use on streets or roads, so that all vehicles may have the smooth tracks which are now exclusively provided for railroad cars.

The invention consists in the use of a metallic corrugated pavement, which shall be laid broad across the street from curb to curb, filling the whole roadway, and thus furnishing, by alternate grooves and ridges, a series of tracks, which will adapt themselves to every gauge of vehicle and to the tread of every tire.

The crowns of the ridges are notched at proper intervals, so as to afford a gripe to the feet of the horses, and thus overcome the great defect in wooden pavements.

The grooves, which are rounded at the sides, will constitute smooth tracks for the wheels. The wheels will find natural gutters to settle in, and to roll along without either noise or great friction.

The grooves which run between the parallel notched ridges will constitute the true tracks, and the ridges being rounded instead of sharp-edged like the present street-rail; and, moreover, not being higher at the crown than the ordinary cobble-stone is from the bed level, will enable vehicles to turn in and out from the grooves with the greatest ease.

The chief feature of the metallic bedded road, however, which I propose is, that it is all curves even to the notches, made for the feet of the horses, or ridges, so that there can be no wrenching or swinging of vehicles on the metallic pavement, and not the least difficulty in turning in and out.

It is very certain, therefore, that as soon as any vehicle traversing streets which are covered with my proposed metallic corrugated pavement, gets into a straight line, it will necessarily be upon a railroad, and it cannot get off, or rather out of the track, unless it turn to the right or left on purpose.

The street-cars and stages can then maintain their present privilege by a simple alteration of their wheels, while the owners of private vehicles will enjoy the same benefit.

The other advantages of this pavement are that its traffic will be comparatively noiseless, and will be so constructed as to be easily kept clean, because the natural manner in which it will lead off the water will give facility to street-passengers to make crossings at any point dry shod.

The invention consists, therefore, in constructing a metallic road-bed of a series of metallic plates, A A, which are cast, rolled, or otherwise formed of suitable metal, and which have corrugated surfaces with alternate ridges, *a*, and grooves *b*, as shown. The ridges and grooves are arranged parallel to the street-curbs.

At street-crossings these ridges may either be continued in curved lines from one street into another, after the present practice of street-cars, (as indicated in the lower right-hand corner of fig. 1,) or the curves between the ridges may be continued in a series of straight lines upon smooth iron bed-plates, which lines will be formed for such continuation by small iron cobbles or inverted metallic saucers *c c* being formed upon the surface of said plates in straight rows at four or five inches apart.

The plates constituting the pavement may be placed or bedded and connected together in any suitable manner. The plates will probably be about an inch or an inch and a quarter in thickness, and, as they may be strengthened with short ribs and anchors underneath, it is believed that they will find a sufficiently secure bedding in rough sand. This latter feature alone furnishes a crowning advantage over all other forms of pavement, for, instead of being necessary while repairing the metallic road to turn the general traffic into side streets, as is the case with all other pavements, a sunken, broken, or disordered plate of my invention can be pried up and either thrown aside or restored to its level by a few shovels full of sand or other filling, without interfering with the traffic on the other plates.

A pavement made on the aforesaid plan will not only be durable and reliable, but also less expensive than many kinds of pavements now in use, besides economizing the vehicles and goods passing over it.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The corrugated metallic street-pavement, composed of alternate parallel ridges and grooves, the ridges being notched, as set forth.

The above specification of my invention signed by me this 28th day of June, 1869.

GEO. WILKES.

Witnesses:

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Fig. 1.

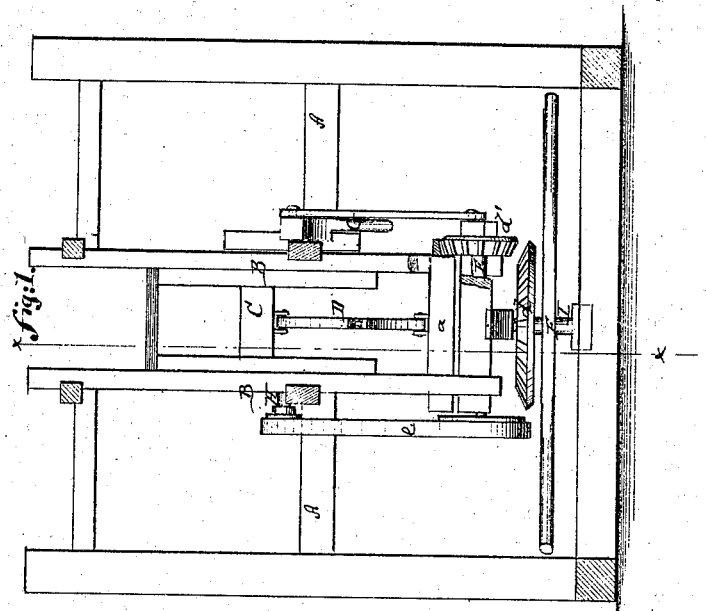
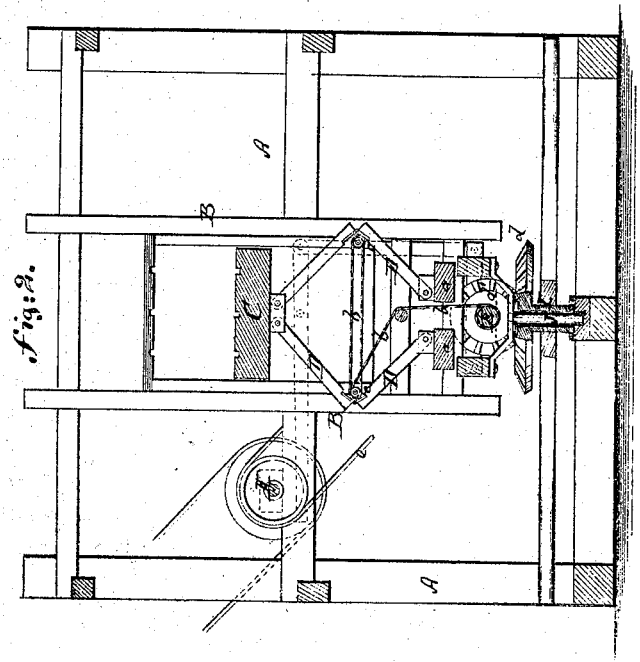


Fig. 2.



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